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ABSTRACT

Economic loss and hardship during the 1929 Depression produced marital tension resulting from increased conflict over finances and temperamental behavior of husbands and wives. Data on 110 couples were obtained from the Berkeley Study at the Institute of Human Development in California. Annual data were collected from wife, home observer, and child from 1929 to the end of World War II. Husbands were interviewed in 1930 and again in the early 1940s. Differential loss of income during this period formed the focus of this study. Marital tension and temperamental (irritable, emotionally unstable, tense) scales were developed by trained coders who used original qualitative data. Heavy income loss during the 1930s increased financial disputes which substantially raised the level of tension in marriages and which weakened marital relations by increasing temperamental behavior, particularly of men, who, as major breadwinners, became worrisome, unstable, and explosive. Both effects were most pronounced among families with minimal psychological coping resources, initially weak marriages, and unstable men. Couples of higher socio-economic status were more affected by Depression losses than couples in the working class. (KC)

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Economic Hardship and Marital Relations in the 1930's

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Abstract

Economic stress in families and lives represent interdependent problem areas, although most work to date has ignored this critical relationship. Consistent with Burgess's concept of the family, as a "unity of interacting personalities," a life course perspective of family development attends to the complex interaction of individual personalities, and emergent social relationships in family change. With longitudinal data from the well known Berkeley panel, this study uses a life course framework to model the impact of relative income loss (1929-33) on change in the marital relations and personalities of 111 couples up to the 1940s. Economic loss produced marked declines in marital quality among middle and working class families. In large part, this outcome reflected the acute deprivational meaning of income loss to husbands. Marital discord increased under economic pressure as men who lacked adaptive resources became more difficult to live with, more tense, irritable, and explosive. But even apart from such change, marital relations generally grew more tense and conflicted as couples were forced to adapt family needs to unexpected income constraints. These "direct" effects of income loss depended on the strength of the marital bond before hard times, and on socioeconomic position when entering the 1930s.

Economic Hardship and Marital Relations

Shattered families are common legacies of recurring hard times in society, though little is known about the causal processes that link economic events to family relationships. Income losses generally heighten preoccupation with budgetary matters, increasing frustration levels and setting tempers on edge. Financial issues quickly become a focal point of antagonism and conflict. Hard times turn into bad times as the marriage disintegrates in rounds of name calling and physical violence.[1] A good many deprived families manage to avoid this downward spiral through the initial strength of marital ties. Another factor is the set of personal resources which family members bring to hard times, their resilience and experience. Families may change as economic hardships alter the personalities of individual members who lack adaptive resources and feel responsible for their family's misfortune.[2]

The proposition that families can be changed by changing the personality of members is implied by developmental perspectives on the family, but remarkably few studies have put this idea to an empirical test.[3] Suggestive work includes the implications of Kohn's (1980) recent research on occupational conditions and psychological functioning when considered in combination with his earlier work (1969) on social class and childrearing. More directly, Entwisle and Doering (1981) use a panel study to relate psychological changes of husbands and wives to changes in their marriage during the transition to parenthood. This type of study is rare in the burgeoning field of life change and individual stress (Barrett, 1979). Though countless studies report an association between negative economic events and mental health, the sequence is seldom traced to relationships in the family. Economic setbacks clearly make a difference in psychological functioning (Pearlin et al., 1981), but how is this difference manifested in the family? What part of the influence of economic loss on families occurs directly through disrupted patterns of social

interaction and what part occurs through adverse psychological changes in the lives of one or more members?

Using longitudinal data on 110 couples, this study builds upon such observations by investigating two mechanisms for the impact of drastic income loss on marital relations in the depressed 1930s: 1) mounting financial pressures and conflicts between husband and wife; and 2) the increasing irritability or temperamental disposition of the male breadwinner. The panel design enables us to model the effect of income loss during the Great Depression on change in financial conflicts and in the husband's temperamental nature.[4] The couples (birthdates, 1890-1910) are members of the well-known Berkeley Study at the Institute of Human Development, University of California (MacFarlane, 1938). All were parents of children born in 1928-29, and thus occupied the stages of early childbearing at the beginning of the project. Approximately three out of five were located in the middle class in 1929. Annual data were collected from mother, home observer, and child from 1929 to the end of World War II. Men were interviewed in 1930 and again in the early 1940s. Using annual income data, we view differential loss of income as the study's point of departure; less than half of the couples lost more than a third of their initial 1929 income. As expressed in this sample, the Great Depression resembled a natural experiment by exposing families to relatively nondeprived and deprived experiences with minimal regard for their particular life histories in the middle and working class.

As economic loss in the Great Depression directly undermined the identity and competence of men, their psychological functioning or personality became a primary link to the quality of family relations. The burden of family economic support fell largely on men at the time. Amidst the individualistic ethos of the 30s, men blamed themselves for loss of income and job, as did their wives on occasion. Jane Addams (1932:13) observed in the winter of '32 that "one of the most unfortunate consequences of the Depression is the tendency to call a man a failure because he is out of work." Marienthal (Jahoda et al.,

1971), a sociographic study of an Austrian village in the 1930s, offers a vivid picture of the shrinking world of men and the expanding obligations of women. Consistent with this observation, the Lynds (1937:179) speculated that "it is the world of male roles that has been under the most pressure in Middletown in the depression, and that for women the years following 1929 may even in some cases have brought a temporary easement of tensions." Women's lives in the hardpressed economics of Depression families became one of valued stamina and sacrifice, not one of personal failure and deficiencies. In the culture of the times, deprived men could not readily turn to the family for personal meaning and significance. Both sexes suffered from family losses (Elder, 1974), but the psychological effects were more direct for men who lacked compensatory roles in the family.

The resources and limitations of Depression families and individuals before hard times had consequences for their response. Some family types and members displayed greater resilience in stressful times than others (Cavan and Ranck, 1938). The emotional support, communications, and organization of a resilient marriage proved useful in Depression problem solving and adaptation. On the personal side, resilience has much in common with the concept of stamina; "the physical or moral strength to resist or withstand disease, fatigue, or hardship" (Thomas, 1981:41). Extreme economic pressures are likely to accentuate "troublesome" dispositions, such as irritability, that are manageable in less stressful circumstances. The neurotic under pressure becomes more difficult to live with, as statistics on marital instability attest (Costa and McRae, 1980). In both respects, family and individual, we hypothesize that Depression losses increased marital tensions most notably under initial conditions of minimal resilience -- such as marital discord and the husband's emotional instability.

The family and individual strands of this study address a general problem in the field of life course analysis; the relation between personal or developmental change, on the one

hand, and family development or change, on the other. Marriage joins two developmental histories and each developing individual influences the emerging relationship (Turner, 1970). In what ways are the personalities of husband and wife both products and producers of their relationship? This question has special relevance to Ernest Burgess's concept of the family as a "unity of interacting personalities" (Bogue, 1974); a concept which pre-dates the historical time of this Depression study. We seek to extend this formulation with an explicit processual account of family and individual change during the Great Depression.

Economic loss in the early 30s has particular relevance to both marital and individual stress by increasing the gap between customary expectations about control over preferred outcomes and adaptive resources. Depression losses entailed a "disturbance of habit," to use W.I. Thomas's phrase (Elder, 1978), by undermining routines that pattern family life. The 1930s gap between expectations and achievements was especially dramatic since this economic downturn followed a period of unprecedented economic growth when there appeared to be no end to rising prosperity. Temporary downward mobility was the most salient characteristic of the Depression for families, as against more chronic states of poverty. Accordingly, our primary measure of economic pressures is an index of income loss.

We begin the analysis of Depression hardship in marital relations with a brief discussion of the measurement properties of income loss, marital tension, and personality. The question of cause and effect is addressed in the context of this discussion. Does marital tension accentuate the temperamental tendencies of husbands and wives, is temperamental behavior a source of tension, or is the process reciprocal? We address this issue with analytic procedures developed by Joreskog and Sorbom (1979). The last part focuses on the direct and mediated effects of economic loss on changes in marital quality and personality from 1930 to the 1940s. The potential conditional role of pre-Depression

resources is tested within these models to determine whether the marital impact of income loss varied by prior resources, such as marital quality and individual resilience.

The longitudinal design of this investigation enables us to clarify causal interpretations. We model the influence of changes in economic circumstances on changes in the family and in the lives of family members. It is therefore unnecessary to make strong assumptions about the role of unchanging or relatively stable personal characteristics in producing income loss (Kessler and Greenberg, 1981). Moreover, our definition of income loss as exogenous to personal and family change is strengthened by the economic processes of the 1930s. Economic misfortune bore no reliable association with family relationships before the economic collapse or with psychological functioning at that time.

The Berkeley Families and Measurement Issues

The Berkeley Study was launched in 1928 with every third birth in the city of Berkeley over a period of 18 months, and currently represents one of the oldest panel studies in operation. A total of 112 children and families were studied intensively year by year across the 1930s. Clinical assessments of marital relations and personality were made each year on the basis of interviews and home observations. All husbands and wives were interviewed in 1930. Subsequent interviews were carried out with the wives. To maximize the sample size, the Institute staff averaged yearly measurements within a set of periods: before the Depression (1930 and earlier), during the collapse (1933-35), and after (1936-38, 1939-41). For each case, period scores represent the average value for the annual data at hand.[5] Using this procedure, attrition is not a major problem. Data on marital relations are available on 92 percent of the cases in 1933-35 and on 86 percent of the families by 1939-41. Only seven marriages were broken by 1941 and they were scored high on marital tension. The most common reason for attrition was death of a spouse (11 cases by 1941).

The Berkeley couples reflect the composition of California demography in general, and Berkeley specifically. They are clearly not representative of a national sample. Most are white, Protestant, and native-born; only six percent are black. Slightly more than 60 percent were positioned in the middle class as of 1929. Two-fifths of the women were daughters of foreign-born parents (mostly in the United Kingdom, Germany, Scandinavia, and the Mediterranean area). Foreign parentage describes about half of the husbands. Nearly four out of five of the couples were native born, either in California or in the midwest. Berkeley is distinctive as a university town, but its economic uniqueness was lessened by employment throughout the region. Most residents in the labor force commuted to work settings in other Bay Area communities, especially Richmond, Oakland and San Francisco.

Depression Hardship

Family income prior to the Depression averaged $1660 in the working class compared to $3050 in the middle class (as of 1929). Working class families started out with lower incomes, and ended up with a more substantial loss. Nearly 60 percent lost 35 percent of more of their income between 1929 and 1933, compared to a third of all middle class families. Overall, total family income declined 29 percent between 1929 and 1933. The impact was moderated by the decline in cost of living, a maximum of 25 percent. In real earnings a number of Depression families were actually better off than they had been prior to the Depression.

Our measure of economic change is the percent difference between family income in 1929 and the lowest annual income figure in the early 1930s (1933 to 1934-35).[6] This is a measure of relative income loss or deprivation. Job loss is only one source of economic pressure, though it is commonly used to measure hard times. A good many families with employed heads lost income through business declines, the downgrading of pay scales, and

displacement from higher to lower skill jobs. Unemployment was mainly confined to the working class and correlations among this factor, social class, and income made impractical an attempt to disentangle their effects. For our purposes, income loss represents a general index of the loss of material resources. More specific measures of asset changes are not available. However, prior research (Elder, 1974) indicates that loss of income generally coincided with the loss of family assets, from life insurance to furniture and other residential property.

Marital Tension and Financial Conflicts

A clinician at the Berkeley Institute of Human Development used interviews and home observations to assess marital tension on a five point scale. Scores range from well-adjusted couples who were judged "exceptionally happy, frank, affectionate, and in agreement on many things" to a highly volatile relationship which shows signs of "chronic tension and extreme conflict." Divorced or separated couples were coded high on tension. The assumption that divorce reflects tension corresponds with our finding that a substantial number of the intact couples with "high tension" scores had initiated divorce proceedings. Such action was not found among any of the well-adjusted couples.

This measure acquires more precise meaning when it is compared with an index of conflict on how to manage family income or resources. Each year the couples were assessed on a five-point scale that ranges from "no friction over income" to "extreme unhappiness and friction over the management or size of income." The average scores for 1933-35 correlate .55 with level of marital tension at this time. Judging from this moderate degree of association, it is apparent that many couples who were conflicted over finances were successful in isolating this problem. Marital tension taps a more generalized syndrome, which is especially sensitive to personality factors (see Table 1), while financial conflict represents a more direct index of the economic situation. For

example, marital tension in 1933-35 is correlated with income level and social class at -.15 and -.11 respectively, while financial conflicts are correlated -.41 and -.31 with these variables.

The Temperamental Spouse

The personality characteristic most central to this investigation is a behavioral disposition we call "temperamental." This concept refers to a syndrome of characteristics that have consequences for marital tension and disruption (Costa and McCrae, 1980; Locke, 1951; Renne, 1970) and provides a theoretically meaningful link between economic pressures and marital difficulties. Qualities of the "temperamental" adult are a subset of the more general category of "neurotic" traits. Costa and McCrae (1980:77) identify three such traits. The anxious person who is "high-strung, easily startled and fearful;" the hostile type who tends to be "irritable, quick to take offense, and hot-tempered;" and the vulnerable person who displays on "inability to cope with external pressures and difficulties." Three five-point scales are relevant to these attributes: 1) irritable (high scorers are "explosive, quick to flare up or become fretful"), 2) emotionally unstable (high scorers are "excitable, tense, sullen, display exaggerated reactions"), and 3) tense/worrisome (high scorers are "extremely worrisome, agitated and tend to fret or borrow trouble"). These ratings were based on spouse interviews and home observations. More detail on measurement is covered in the next section.

Dispositions of this sort are relatively stable across time and situations. On measures of "neuroticism," Costa and McCrae (1980:77) report stability coefficients for a ten-year span that range from .58 to .70. These correlations are not so high as to suggest that personality does not change, nor so modest as to imply that personality lacks sameness across situations or time. They are consistent with an "interactionist" perspective (Bem, 1982) which argues that behavior is determined by the joint influence of person and

environmental factors. A number of studies (Kessler and Cleary, 1981; Pearlin et al., 1981) have reported individual differences on vulnerability to stressful life events. As defined in this study, the temperamental spouse is especially vulnerable to economic stress, such as that caused by a heavy loss of income. Adaptive requirements are lacking for the coping requirements of the situation. By comparison, the calm, resilient person is able to face hardship with a positive outlook and may even gain strength from the experience of mastering setbacks.

The temperamental qualities noted above may be less problematic in family relationships which moderate the adverse effect of economic stress on psychological functioning (Gore, 1978), although the buffering role of social support remains ambiguous in existing studies (Williams et al., 1981; Thoits, 1982). Some years ago Locke (1951) found poor marital quality and divorce more common when either partner angered easily and failed to get over anger quickly. Rushing (1979) and Costa and McCrae (1980) report correlations between neurotic attributes and marital disruption, although the causal direction is unclear. This correlation may reflect the direct influence of marital relations on psychological functioning (Williams et al., 1981), psychological influences on marital relations (Rushing, 1979), the buffering role of marital support under environmental pressures, or any combination of these influences. Overall, the bulk of available evidence documents the adverse effect of relatively stable personality characteristics on marital relations (Eysenck and Wakefield, 1981), but a test of this assumption is needed.

Marital Tension and Temperamental Behavior: Preliminary Models

Confirmatory factor models were developed to test the measurement properties of the marital and temperamental scales, as well as their potential reciprocal relation. The scales are based on the 1930 interviews with husband and wife; and on home observations made by a field worker. Each scale was used by the interviewer and the home observer to

assess husband and wife. The resulting judgments are highly interrelated (see MacFarlane, 1938) and were consequently averaged to yield a single scale score per case. A technical description of the factor analyses is presented in the appendix. Three conclusions deserve special note at this point:

1- the measure of 'marital tension' is highly reliable (standardized factor score exceeds .95), and so are the 'temperamental' scales (the emotional instability items for both spouses have factor scores of approximately .90).

2- the marriage indicators on the husbands and wives are highly congruent (r=.92), reflecting perhaps the common source of home observational data.

3- the causal process is unidirectional. Marital tension results from temperamental behavior on the part of husbands and wives; it does not influence these tendencies. However, subsequent analyses do show a lagged effect of marital tension on temperamental behavior.

Our assumption that "marital tension" is an observable feature of marital relations (e.g., it can be diagnosed by trained coders) is basic to all analyses here and warrants further comment.[7] Evidence bearing on this point is the correspondence between the marital tension index and measures of each spouse's "marital satisfaction." The marital satisfaction items were not included in the initial coding operation, but were independently developed and applied by trained coders in the 1970s. Using qualitative materials in the archives, the coders were instructed to interpret each spouse's assessment of personal satisfaction with the relationship. Even with independent data from husband and wife in 1930, the spouse inter-correlation on marital satisfaction is .80. Moreover, these measures correlate highly with the scale of marital tension; about .80 for wives and .87 for husbands. These are not self-reported dimensions of marriage, but our spouse inter-correlation is close to the .73 which Eysenck and Wakeman (1981) obtained on self-reports from a large sample of husbands and wives.

Beyond the 1930 period, when only wives were interviewed, we gave special attention to the validity of indicators on the husband's personality; and to the independence of spouse ratings generally. The wife interview data were supplemented throughout the 30s with data from home observations. Nonetheless, this data base could bias structural parameters in a number of ways. First, wives may have presented consistently unrealistic (favorable or unfavorable) views of themselves, their husbands, and their marriage, thereby inflating correlations among all marriage and personality indicators. Second, wives' perceptions may represent invalid measures of the husband's personality, with biases that are uncorrelated with any other factors examined here. In this case, measurement error is random with respect to other measured variables and correlations involving husband's personality measures are attenuated. Third, wives may have emphasized an unfavorable view of husbands when the marriage was not going well, thus inflating the correlation between husband's personality and marital tension.

Correlations among indicators of personality and marital relations in 1930 and 1933-35 are presented in Table 1 to show the pattern of stability, reliability, and validity. Given the high reliability of measurement, as shown by the LISREL models in the appendix, we did not adjust these correlations for measurement error. Instead, we computed a "temperamental" index to maximize the reliability of the personality items; a simple average score across three items - irritable, unstable, tense. Alternative weighting procedures were tested and influenced the results in only trivial ways.

---Table 1 about here---

Correlations between marital tension and temperamental behavior, as measured in this study, are not consistent with the first two forms of bias noted above. First, the personality attributes of husbands and wives (1933-35) are uncorrelated, a result that challenges the notion that wife reports inflated all correlations in this period. Second, the stability of temperamental behavior from 1930 to 1933-35 is high for wives and husbands

(r=.68 and .79, respectively), even though the husband index in 1933-35 is mainly based on interview data from wives. These correlations are well within the range reported by Costa and McCrae (1980) and do not suggest a general attenuation of correlations involving husbands' personality measures in 1933-35. On the contrary, the cross-time correlations support the validity and reliability of the measures.

Finally, the temperamental ratings on husbands in 1933-35 correlate more highly with marital tension than such ratings on wives in this period (.50 vs. .35), a result that appears to support the hypothesis that women depict husbands according to the state of their marriage. The more troubled the marriage, the more the wife attributes negative attributes to her mate. But we might also interpret the result from the perspective that men were more adversely influenced by heavy income loss than were wives. Hence the relatively large correlation between husband's temperamental behavior and marital tension may reflect the common association of income loss with both factors. Indeed, regression equations that control for the effects of income loss (Table 3) show almost identical effects of temperamental behavior (husband and wife) on marital tension in 1933-35.

The correlations in Table 1 also lend more support for the unidirectional influence of temperamental qualities on marital tension. The LISREL analyses in the appendix demonstrate that marital tension within time periods does not cause husbands and wives to become more temperamental. That is, marital tensions do not make temperamental adults. A model of marital tensions as a source of temperamental behavior implies correlations between personality items on each spouse since both partners are exposed to the conflicted relationship. However, we find no evidence of such a correlation. Even changes in the husband's temperamental behavior (not shown here) are not linked to such changes in the wife's behavior.

Income and socioeconomic status in 1929 are not correlated with any of the items on marriage and personality. Nor is age a correlate, though wife's age is correlated with the

husband's temperament (r=.23). Differences in age were correlated with husband's temperamental behavior (r=.37) and with marital tension (r=.36). A large age difference generally meant that husbands were substantially older than wives. Other family characteristics (e.g., number of children, education level, class differences in background, foreign-born) were not significantly related to marital tension or to temperamental behavior. Even if these factors were linked to marital tension and temperamental behavior at a point in time, they would not bias coefficients in the models of change discussed below since such models difference out the constant effects of unchanging characteristics.

In summary: the goal of this analysis is to model the process by which economic decline created marital tension. The best available measure of decline is relative income loss which is a known correlate of the loss of security assets in the 1930s. Measures on the marriage and personalities of husband and wife are not ideal, though correlations among these variables over time suggest that many obvious forms of bias are not present. Moreover, a non-recursive model of marriage and personality suggests that the two are not reciprocally related <u>within</u> time periods; temperamental dispositions influence but do not result from marital tension. It is with these assumptions on the measurement properties and direction of influence that we begin our discussion of the effects of economic decline.

Change in Marriage and Personality: Structural Models

The analytic task of this section focuses on the life course process by which economic pressures made a difference in marital relations during the 1930s. To explicate this process, we begin with the zero-order relations between economic deprivation and all measures on the marriage and personality from 1930 through 1941. Economic deprivation is measured by income loss during the first half of the decade and an index of economic hardship later in the 1930's. The latter index is based on the sum of three items: whether or not families were on public assistance, whether or not the head was unemployed in this

period, and whether or not families recovered their 1929 income. Note that this index combines the continuing effects of economic decline (correlation with earlier income loss of .50) with chronic hardship that was more prevalent in the working class (correlation with SES of .55).

The economic correlates of marital tension and financial conflicts (panels A and B of Table 2) are modest in 1930, before most loss occurred, and increase considerably beyond this period. As expected, economic deprivation is more strongly related to financial conflicts than to general marital tension, and economic hardship later in the 1930s correlates more strongly with marital indicators later in the 1930s. The only period correlations that do not follow the anticipated patterns are in 1936-38, possibly reflecting greater measurement error in this period. We expected correlations with early income loss to be higher in 1936-38 compared to 1939-41, yet the latter correlations are slightly larger (.19 and .36 compared to .28 and .40 for marital tension and financial conflicts respectively). Two additional points on the correlations with marital relations are worth noting as background to the structural models.

---Table 2 about here---

First, the correlations are modest in 1930, but they are not zero. Why would these marital indicators, presumably measured before the Depression, correlate with subsequent income loss? One explanation is that families experienced Depression losses as early as 1930 and interview transcripts provide some evidence of this. The correlation is mainly restricted to working class families, reflecting the early arrival of hard times in this stratum. Another possibility is that families not yet materially affected in 1930 suspected or knew they would soon face financial difficulties, and this anticipation and uncertainty created marital tension (Kasl, 1979). Whatever the reason, we make adjustments for this early correlation in regression analyses of change in marriage from 1930 to 1933-35, a practice that may produce conservative estimates of economic influences.

A second point of greater substantive interest centers on income change and level. Income loss correlates more strongly than 1929 income level with marital tension and financial conflicts[8] (compare these correlations to Table 1). This supports the argument that a marked decrement in economic status is more stressful than a chronically low level of resources. Economic change disrupts customary ways of living and behaving, producing a stressful disjunction between family claims and the resources with which to achieve these claims.

Correlations between economic deprivation and personality (panels C and D of Table 2) are presented separately for subgroups of husbands and wives depending on their temperamental disposition in 1930. Husbands above the median on the temperamental index are distinguished from those below the median, as are wives. This procedure enables us to examine the "interaction proposition" that personal dispositions interact with situational influences to influence behavior.

Overall these correlations by subgroup support the view that temperamental behavior in the 1930s depended on the joint influence of economic deprivation and psychological resources. Men who entered the 1930s calm and stable did not become explosive and moody under economic pressures. Indeed, for this group, the correlations are generally negative (but significant in only one case), suggesting that men who were successful copers moderated any temperamental inclinations when they lost jobs and income. We observe a similar pattern among wives who were calm and emotionally stable before income loss; constructive responses to economic deprivation involved controlling emotions that might interfere with successful adaptation and create family tensions.

Only one group became more temperamental under economic privations: men who were irritable, tense, moody types before hard times. Among these men we see an accentuation of characteristics already evident when entering the 1930s. In contrast, there is no evidence of accentuated temperamental behavior among wives when their

families lost income. In sum, the correlations support the interaction hypothesis: psychological effects depended on the interaction of gender role, psychological resources, and income loss. A more rigorous test of this interaction by regression analysis is presented below.

The structural models address a number of questions on the process by which marital relations were altered under economic pressures. Did these effects operate through personality changes of husbands and wives? Were there also direct effects on marital interaction, as through conflicts over finances, apart from the personalities of each spouse? To address these questions, a multiwave panel model was developed as summarized in Figure 1.

---Figure 1 about here---

Economic loss and hardship influence marital tension through increased conflict over finances and the temperamental behavior of husbands and wives. However, we assume that these influences are not uniform across all couples. The reactions of husbands and wives and marital impacts depend on both personal and familial resources. The model as specified here is recursive; no simultaneous reciprocal influences are allowed. This amounts to an assumption about the timing of influences. Based on the results discussed above (also see Appendix), we assume that temperamental behavior affects marital tension contemporaneously (i.e., within a three year period), but that marital tension requires more time to influence this relatively stable personality characteristic.

One final observation before the empirical results. We assume that all marriage and personality characteristics are dependent on prior measures of these variables, e.g., 1933-1935 marital tension reflects such tension in 1930. By including lagged measures of the dependent variables, all other influences can be interpreted as effects on <u>change</u> in the dependent variables (Kessler and Greenberg, 1982). With this background, we begin

with the effects of income loss on marital relations in 1933-35 and then turn to economic influences later in the 1930s.

Marital Change in the Early 1930s

During the early years of the Depression, marital tensions increased among families that suffered heavy income losses, a change that occurred through husbands who became more unstable and in part through a rising level of conflict on financial matters. Model 1 (Table 3) predicts marital tension in 1933-35 with prior tension in 1930 and percent income loss over this period (beta=.20). The coefficient for income loss can be interpreted as effects on change in marital tension, controlling for the initial level of tension. In this way, any effects of unmeasured characteristics associated with marital tension in 1930 are statistically controlled.

---Table 3 about here---

The substantial total effect of economic deprivation on marital tension provides a rationale for testing the mediating role of personality and financial conflict. Correlations (Table 2) suggest that greater personal distress under economic pressure was largely confined to husbands who had little in reserve (e.g., were unstable and irritable) before the economy collapsed. This observation is confirmed by analyses in Table 3 (models 4 and 5). With adjustments for initial temperamental behavior, the overall effects of income loss on men's temperamental behavior in 1933-35 are positive and statistically significant. No such outcome appears in the lives of their marital partners. The difference in deprivational influence on husbands and wives is statistically reliable.[9] The analysis also allows for the possibility of a lagged influence of marital tension on temperamental disposition, a lag of one three-year period. There is marginal evidence that men became more temperamental under prolonged marital tension (beta=.12, t=1.91), and that no change of this sort occurred among wives. The contemporary effects of temperamental

behavior on marital tension are clearly much more pronounced, as shown in Model 2. These influences, along with the accentuation of husband's instability, support the individual mediation hypothesis.

A rising level of marital conflict over financial issues represents a more powerful link between income loss and marital relations than the destabilizing influence of an explosive, irritable, worrisome husband. Regardless of income before the 1930s, a heavy loss of income sharply increased financial conflicts between husbands and wives during the bleak years of Depression hardship (model 6, Table 3), and this change largely explains the deprivational effect on marital tensions. The net effect of income loss declines from .17 with temperamental behavior in the equation to .04 with financial conflicts added to the analysis.[10]

This outcome is based on all Berkeley families and individuals in the sample, and thus ignores their differential resources before the economic decline. From theoretical accounts of social change and stress, there is good reason to expect adaptive variation by personal attributes, marital support, and socioeconomic status. To investigate this conditional hypothesis on personality change, we entered three interaction terms into models 4 and 5: income loss by 1930 temperamental behavior, marital tension, and social class. Owing to the limitations posed by multicollinearity, only one interaction term was entered at a time. The interaction effects are presented as t-values in the lower portion of Table 3. Neither class standing before hard times, nor level of marital tension made a reliable difference in the effect of income loss on the personality of men and women during the Depression.[11] However, the effect is substantial among men who were relatively unstable and irritable when they entered the 30s (t=2.01). Hard times notably increased or accentuated the unstable tendency of these men.

This conditional hypothesis has long been part of family stress theories in the prediction that relationships are differentially vulnerable to external pressures (Hill, 1949; McCubbin

et al., 1980). As noted earlier, pioneering studies of families under stress in the Depression suggest that highly integrated families drew even closer under economic pressure, while loosely integrated families became even more disorganized. One possible implication is that couples without chronic disputes and friction before hard times were better able to adapt to the economic crisis than couples who brought their conflicts into the Depression.

Financial conflicts in hardpressed families generally reflected marital tensions before hard times. The interaction effect (income loss by 1930 marital tension) is positive and significant at the .10 level (t=1.94), thus providing marginal support for the concept of marital integration as an adaptive resource. A more specific attempt was made to test the integration effect of economic crisis; the notion that marital bonds were actually strengthened in families that were highly integrated as of 1930. We divided the sample into subgroups of marital tension, 1930 by using the median as the dividing line. The effects of income loss turned out to be more negative in the high than low tension group, as expected, but hard times also made life more conflicted for couples who ranked high on marital quality before the Depression. The difference is merely one of degree. However, the initially strong marriage was resilient in the sense that mounting financial conflicts did not alter the quality of the marriage to any appreciable extent.

Two other resources that bear upon marital ties were tested with less well-established theoretical bases; initial socioeconomic status and personality, husband and wife. Socio-economic status taps both economic resources and perhaps greater knowledge of community resources which should enhance adaptations to reduced income. On the other hand, lower status families have greater experience in coping with economic hardship and may be less concerned about the status implications of income loss. The rationale for the interaction with temperamental behavior is the notion of strains piling up on a couple with minimal reserve. Studies of stressful life events (Barrett, 1979) generally assume that numerous events within a short-time span will be stressful in a way that cannot be explained by the

effects of each individual event, especially to persons who lack inner strength or resilience. As shown in Table 3, both socioeconomic status and husband's personality interact with economic loss in relation to marital tension during the early 30s. Economic deprivation sharply increased marital tensions when the husband was temperamental at the very outset of the crisis. This effect does not occur in relation to the wife's stability or irritable nature. In the case of socioeconomic status, the effect of high status is to intensify the deleterious effect of income loss above that observed in the working class. Heavy income loss was more of a break with the past among middle class families and a radical 'disturbance of habit' in which resources dropped well below their standard of living expectations.

Depression changes in family income altered marital relations through (1) negative interaction patterns on financial matters and (2) the diminished stability of men, but under what conditions were these marital outcomes most likely to persist and change in the late 1930s? As we look beyond the most dramatic changes of the early 1930s, do we find some implications for marital relations up to World War II? What were the consequences of prolonged economic hardship and recovery?

Marital Change in the Late 1930s

As the 1930s progressed some families recovered economically as men regained old jobs or acquired new ones and earlier wage levels and work hours were restored. Not all did, however. Particularly in the working class, many families continued to face economic privations, while still other formerly nondeprived families slipped into the ranks of the economically depressed as the second wave of the Great Depression hit. One can imagine varied consequences for families following different economic trajectories; those who were chronically deprived through the 1930s, the deprived who recovered, the newly deprived, and those who were minimally affected by the Depression. Data limitations,

including sample size, preclude a detailed examination of these varying trajectories and their outcomes. We are also unable to distinguish between the influences of unemployment and depressed income. Nonetheless, available data do permit us to say that, in some combination, these continuing and new economic pressures created additional marital tensions in the late 1930s beyond those evident earlier in the decade.

Living conditions over the last half of the 1930s reflect a high degree of continuity with prior circumstances, both economic and marital. Families that lost much of their 1929 income early in the Depression decade were likely to experience bad times once again in the late 30s, especially around the second economic collapse of 1937-38 (r=.50 between income loss and the hardship index for 1936-40). Operationally hardship was defined as experience with unemployment, public assistance, or chronically low income during the late 30s. Persistent economic hardship is predictive of a high level of marital tension in 1939-41 (r=.46).

All effects of late economic hardship on marital tension in 1939-41 are mediated by the irritability and explosiveness of husbands, the increase in financial disputes or conflicts, and prior marital tension (Table 4). By including lagged measures on the dependent variable from the prior period (pre-1939), the regression coefficients in Table 4 show the effects on incremental changes in personality and marriage. This procedure enables us to control the indirect effects of income loss that operate through prior changes in the 1930s. Economic misfortune in the last half of the 30s generated greater instability among men even up to 1941, especially when they lacked personal stability and a stable marriage at the very outset of the crisis decade. With such personality outcomes controlled, persistent hardship made financial conflicts a way of life for a good many couples in the 1930s and these conflicts enhanced the generalized tensions of marriage as the decade ended.

---Insert Table 4 about here---

The interaction between socioeconomic position and persistent economic hardship (positive in all equations) shows more damaging effects in the middle class as measured by level of marital tension. This difference is not statistically reliable, though it conforms with the differential influence of early Depression losses. Both early and late in the decade, middle class marriages appear to have been especially vulnerable to the pressures of heavy income and status loss, perhaps reflecting a wide disparity between expectations and resources. Another side of the picture comes from the additive effects of low socio-economic position through persistent hardship. Families low in status before the economic crisis were more likely to lose substantial income early in the 1930s (r=.28) and they were even more likely to remain in this depressed state throughout the 1930s when compared to higher status families (r=.55 between status in 1929 and hardship, 1936-40). Hence, much of the cumulative impact of continuing economic troubles on marital ties was confined to the lower strata.

The Depression's shadow is very much in evidence among the Berkeley families as they entered the 1940s and World War II. Both ends of the Depression decade reveal a similar story of hard times and conflicted marriages. Nevertheless, marriages did survive the decade and heavy income loss with minimal change in the quality of relations, and they were likely benefactors of resilient marital ties and mates before the economy collapsed. Irritable, unstable husbands and weak marriages significantly increased the impact of Depression losses on marital tension. In families and lives, economic deprivation accentuated dispositions that were in place before the event occured. This process of accentuation is clearly observed during the late 30s as persistent hardship proved most detrimental to families that lacked personal and social resources.

Conclusion

The impact of economic decline on families may occur directly through social strains in relationships, and indirectly through adverse change in family members. The first line of analysis is found in the sociological literature on family stress and adaptation that dates back to classic studies of American families in the Great Depression and World War II. Though individual change is one theme of the burgeoning field of life event studies, this work largely ignores the individual as a path by which major economic and social changes influence the family. This longitudinal study brings together both lines of analysis in an investigation of drastic income loss and marital relations during the Depression decade of the 1930s.

Using the longitudinal archives of the Berkeley Guidance Study, the research addressed three points: 1) heavy income loss during the early 1930s increased financial disputes which substantially raised the level of tensions in marriages; 2) heavy income loss weakened marital relations by increasing the temperamental behavior of men; and 3) both effects were most pronounced among families with minimal coping resources before the Depression -- initially weak marriages and unstable men. The analysis produced results that generally correspond with each of these points. Mounting economic pressures in the Great Depression damaged marital relationships through husbands who became worrisome, unstable, and explosive. No such effect was observed among wives. Apart from such personal change, marriages were even more strained by negative interaction patterns. Marital relations grew more tense and conflicted as couples were forced to adapt to much lower income.

Contemporary theories of family stress assume that undesirable events have their most deleterious effects on families with limited coping resources, and our results offer modest support for this conclusion. Marital quality was more likely to be diminished by economic pressures when marital relations were weak before hard times. Moreover, personal resources and economic stress interacted in ways that indirectly influenced the

marriage bond. That is, husbands with temperamental dispositions prior to the Depression were likely to become more temperamental if they lost income; while calm, even-tempered men remained relatively unaffected. Personal and family resources made a difference in effective adaptations.

Another protective resource appears to be prior experience with economic hardship. The analysis suggests that couples of higher socioeconomic strata (those with greater cognitive and material resources) were more adversely affected by Depression losses than couples in the working class. The latter included families who had experienced losses before and were less apt to feel traumatized by a lack of financial resources and security. While middle class marriages appear to have suffered to a greater degree from lost income, the working class was more likely to experience severe and prolonged income reductions.

Depression influences among the Berkeley families show the continuing disadvantage of economic loss for marital quality up to World War II, an effect which operated through the erratic behavior of temperamental husbands and the acceleration of conflicts over prolonged budgetary constraints. Relationships strained to the breaking point by Depression hard times often recovered some former qualities, social and emotional, when family income returned to its initial level of 1929 or surpassed it. But in other cases, the Depression's legacy appears in diminished marriages and brittle personalities to old age (Elder and Liker, 1982); and in the arbitrary socialization of children. Ongoing project studies are beginning to identify discordant marriages, unstable fathers, and punitive parenting as primary links between Depression hardship and the impaired life-span development of men and women.

FOOTNOTES

1- One of the most vivid accounts of this process is recorded in Bakke's (1940) qualitative study of working class families in New Haven during the 1930s. Quantitative studies of particular relevance include Straus and associates (1980) survey of family violence and Kadushin and Martin's (1981) interactional account of child abuse.

2- Prior research on families in the Great Depression (Elder, 1974) links family climate to the mood of parents. The coherence of family life depended on the avoidance of drinking problems and acute depression among husbands and fathers. Marital support in the economic crisis largely depended on the quality of marital ties before the economic downturn (Elder, 1979).

3- We use the term "personality" to refer to relatively stable response styles. Sociologists often prefer to use terms such as psychological functioning or makeup to emphasis the fluid nature of behavior. However, recent evidence supports the view that persons can be ordered on certain dimensions and this ordering will remain highly stable over time (Costa and McCrae, 1980). Epstein (1979) finds that individual behaviors measured on consecutive days do not correlate highly; however, when behaviors aggregated across several days are correlated with behaviors aggregated within a later period, the correlations are increased substantially (generally above .60). This evidence is consistent with an interactionist perspective that specifies behavior as a function of general personal tendencies and situation-specific influences. When averaged across a variety of situations, the general personality tendencies can be reliably measured. We rely on the judgments of clinicians who formed an average impression of the husbands and wives on the basis of home observations and reports of behavior in a variety of situations.

4- To many psychologists, "temperament" is a basic, presumably inherited reaction style. One of the major personality inventories is the Guilford-Zimmerman Temperament Survey, which measures such things as general activity, sociability, and masculinity. "Temperamental" as used in this paper, and as often used by laypersons, refers to a much more limited, negatively evaluated aspect of personality, which is probably closely related to "neuroticism" (Costa and McCrae, 1980) and the absence of personal resilience.

5- For example, persons with scores on the degree of marital tension for each of the three years between 1933 and 1935 were assigned the average of those three scores for this period. Persons with missing data in one of the three years were assigned the average of the two years of available scores in this period. In a few cases, only one year of data was available for a period and that score became the period score (the 1930 interviews contained little missing data so aggregation was unnecessary). Unfortunately, the original yearly scores are no longer available so we cannot look at trends by years.

6- Prior research (Elder, 1974) used a dichotomous measure of income loss comparing those who lost 35% or more of their income to families who had not. Results were comparable when this dichotomy was used for the analyses here, although the continuous measure of income loss provided more efficient estimates.

7- Gottman's (1979) observational study of marital interaction provides support for this view. Couples were coded on "negativity" according to nonverbal behavioral cues using a coding scheme developed by Gottman. Coders were able to consistently and accurately diagnose negativity which corresponded closely to distinctions between "distressed" and nondistressed" couples made on the basis of self-reports of the couples in response to a marital adjustment inventory.

8- We also tested the possibility that correlations were higher between 1933-35 marital tension and the lowest year's income during this period, however, these correlations were still considerably lower than those involving income loss. Moreover, the net effects of income loss on marital tension are significant when income level was controlled in a regression equation.

9- To test the difference in effects for husbands and wives, we used LISREL with the three temperament items treated as imperfect multiple indicators and allowed the temperamental behavior of husbands and wives to affect each other in a lagged way. By including husbands and wives in a single model, any correlations of personality across spouses are accounted for (which in this case was to close to zero). We then compared a model in which the effects of income loss were constrained to be equal to one in which they were allowed to differ for husbands and wives. The unconstrained model was a significant ($P < .05$) improvement over the constrained model.

10- Model 3 assumes that financial conflicts caused, but were not caused by general marital tension. This assumption may not be completely correct, although two-stage least squares results suggest it is not altogether unreasonable. A non-recursive model was estimated for 1933-35 with income loss and level used as an instrument for financial conflicts and paternal marital tension (see Appendix) used as an instrument for marital tension. Hence, the assumption is that economic factors influence marital tension indirectly through financial conflicts and having being raised in a tension ridden home environment influence financial conflicts affect marital tension. Results indicate that financial conflicts created generalized marital tension, but marital tension had no substantial affect on financial conflicts.

11- It may be difficult to believe that men of the middle and working class could be affected in the same way by income loss given the relatively low material resources of the working class and the different social contexts of these groups. Elder (1974)

argues that while working class families were more economically vulnerable, middle class families were more sensitive to status loss and their community reputations. Though the magnitude of effects seem to be comparable, it is possible that middle class men reacted largely to status loss, while working class men reacted largely to material loss.

12- These equations were also estimated with marital relations and personality measures from 1936-38 as dependent variables controlling for lagged measures in 1933-35 with results comparable to those of Table 4. The 1939-41 equations are presented since the direction of influence between economic hardship in the second half of the 1930s and couples' characteristics is clearer in this later period.

13- In some cases, personality data were missing, particularly for husbands in the second half of the 1930s. As part of an independent coding operation in 1972, Elder developed a dichotomous indicator of role impairment for husbands and wives which correlates with the temperamental indices at about .50 (gamma). These codes were available for some cases missing on the temperamental indices. To use the data most efficiently, we assigned codes to the temperamental index on the basis of this role impairment indicator. First, we regressed the temperamental index on role impairment for available cases. Second, this regression equation was used to assign values to missing cases. Marital tension measures were also missing for some couples later in the 1930s, but measures of marital satisfaction coded by Elder in 1972-73 were available for some of these cases. Using the procedure described above, we assigned values to couples with missing marital tension scores on the basis of their marital satisfaction scores.

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Appendix A1

PERSONALITY AND MARITAL RELATIONS: CONFIRMATORY MODELS

This appendix addresses two issues: the causal process underlying the correlation between marital relations and temperamental behavior and the measurement properties of indicators for marriage and personality. Figure A1 shows non-recursive models (estimated with LISREL) relating the temperamental dispositions of husbands and wives to marital quality in Panel A and the temperamental dispositions of wives to marital quality in panel B.

To estimate reciprocal paths in these non-recursive models, instruments were chosen that were assumed to affect husbands only indirectly through their wives, and wives only indirectly through their husbands. For example, in the husband's model (panel A) we used indicators of his parents' personality (i.e., irritability) as instruments for his personality and an indicator of his wife's parents' marital quality as an instrument for marital quality. In so doing, we assume that parent characteristics affect temperament or the quality of the relationship <u>through</u> socialization experiences occurring prior to their offspring's marriage. This assumption is reasonable since measures of parent characteristics refer to behavior when the Berkeley husbands and wives were growing up. As part of the 1930 interviews, fathers were asked to think back to their childhood and describe their parents and wives were asked to do the same for their parents.

Instruments generally reflect the state of knowledge at the time and this is certainly true for our cross-generation linkages. Studies (Burgess and Cottrell, 1939; Locke, 1951) have identified qualities of parents and the marriage that show modest predictive power in relation to the marital adjustment of sons and daughters, but the specific causal processes (such as role modeling) are not well understood. Despite such ambiguity, we find a pattern of influence not easily explained by conceptual or measurement deficiencies. The process appears to be unidirectional from personality to marriage. Most forms of bias

created by inadequate instruments and correlated errors between reports on couples and their parents' qualities would lead to expectations of consistently attenuated or inflated reciprocal influences in both directions.

The models shown in figure A1 include multiple indicators of temperamental behavior and couples' marital quality. In addition to indicators already discussed, measures on husbands' and wive's hostility as perceived by the clinicians in 1930 are included. To minimize the possibility of correlated errors across endogenous factors and between exogenous and endogenous factors, we used marital indicators based primarily on the wife interview for the husband model, and reversed this procedure for the wife model. The results were not sensitive to this distinction. Indeed, they were identical whether we used the measures shown in Figure 1A, or measures on the husbands' hostility and marital satisfaction in the husbands' temperamental model, or the single "marital tension" indicator which has a standardized factor loading exceeding .90 in all of these models. This is because the correspondence of the husbands' and wives' marital indicators in 1930 is very high (r=.92 in a confirmatory factor model defining husbands' marital quality as one construct and wives' marital quality as a second construct and excluding the "marital tension" item).

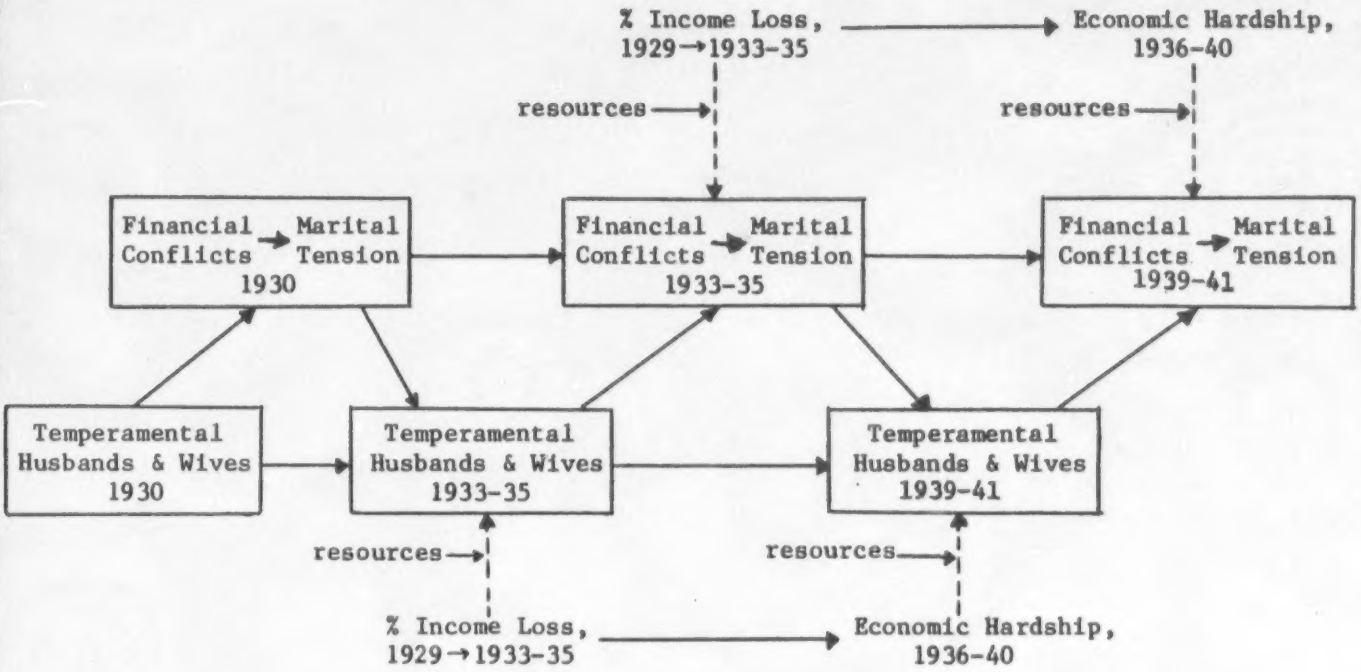
Several additional points are worth noting on the specification of these models. First, we chose to estimate causal processes within periods only after finding that multicollinearity prohibited estimating lagged and contemporaneous effects in a two-wave model, although the assumption that temperamental behavior creates problems in the marriage fairly rapidly (i.e., within a year) is not unreasonable. Second, a correlated error was detected between the hostility of either partner and "tense/worrisome" behavior of the other partner. The negative sign indicates that this correlation was particularly low compared to expectations based on other correlations in the matrix and the theoretical model. This may reflect the mixed connotation of being tense and worrisome; worrisome

people who are not tense are not apt to create hostility in their relationships. Third, we rule out correlated disturbance terms in these models, a decision justified on empirical grounds (i.e., allowing correlated disturbances did not significantly improve the fit between model and data).

Overall for husbands and wives, the correlation between temperament and marital quality is completely accounted for by the influence of temperamental behavior on marriage; the best estimate of the reverse path is zero (this path was not constrained to zero). The same models were estimated for the 1933-35 marriage (using only the "marital tension" measure) and personality indicators and the results were similar. Moreover, the results were almost identical in OLS regression estimates predicting "marital tension" with the temperamental index which averaged the three personality measures. The OLS and LISREL results are comparable because of the high reliability of the marriage and personality indicators and the unidirectional flow of influence. As such, standard OLS regression procedures are sufficient for the structural models.

Figure 1

Structural Model of Direct and Mediated Influences of Income Loss on Marital Tensions

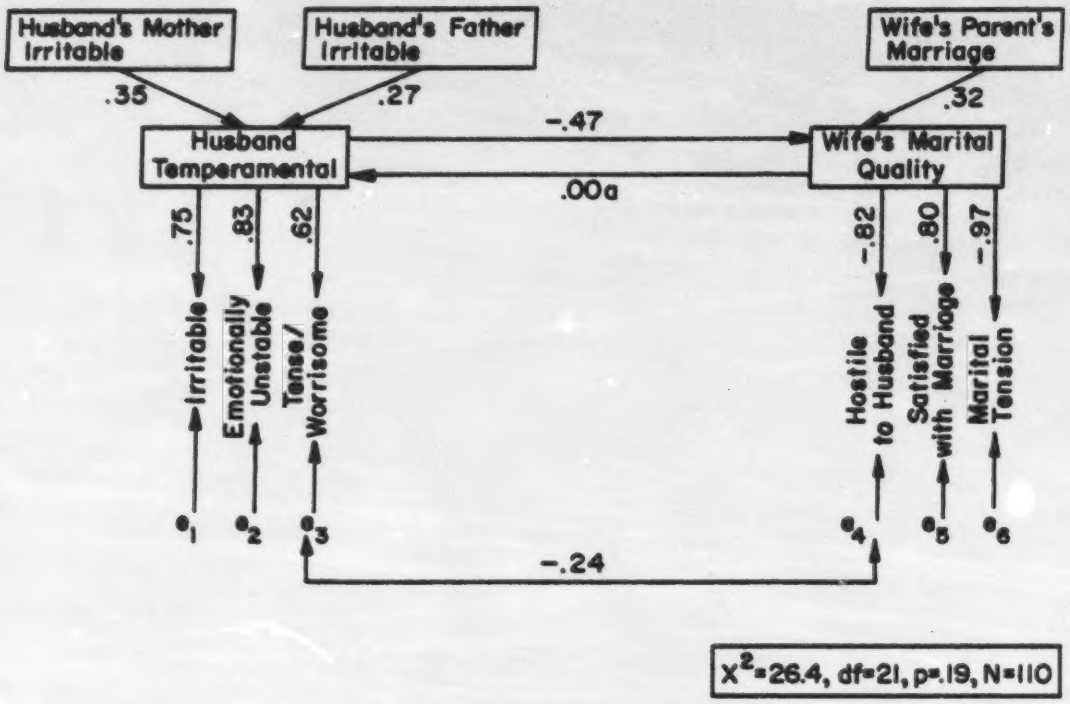


Note: Dotted lines denote contingent paths; economic influences vary by personal and familial adaptive resources.

Figure A1

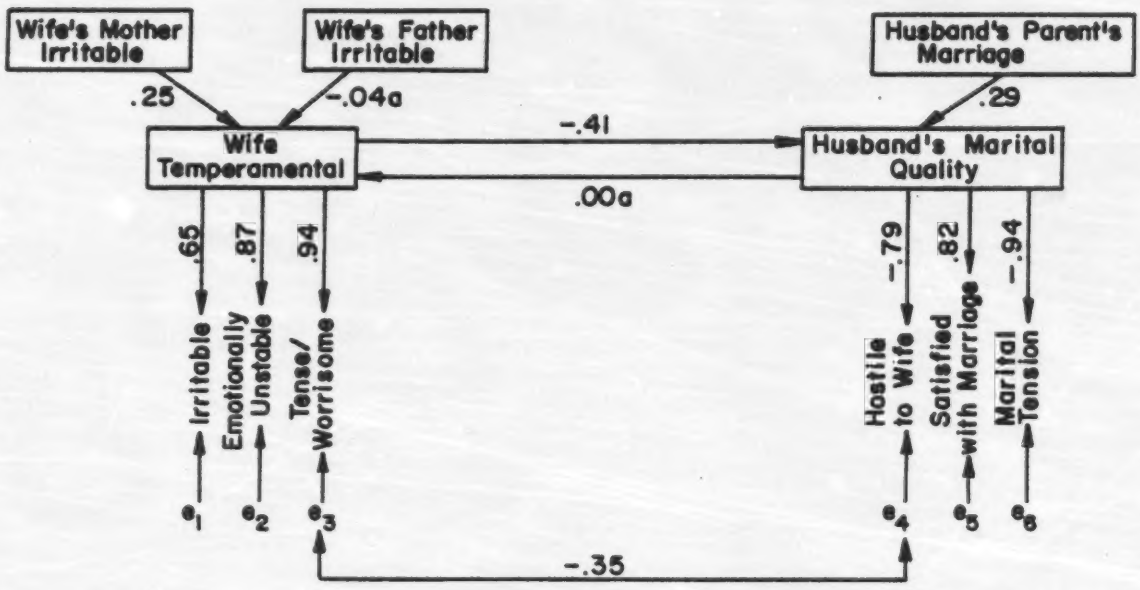
Reciprocal Relationship Between Marriage and Temperament in 1930-31 (standardized coefficients)

a) Husband's Temperament and Marital Adjustment:[b]



X^2=26.4, df=21, p=.19, N=110

b) Wife's Temperament and Marital Adjustment:[b]



X^2=32.4, df=21, p=.05, N=110

[a] Not significant at .05 level. These paths were estimated at zero; they were not constrained to zero.

[b] All measures based on clinical ratings from transcripts of interviews with each partner separately. Husbands and wives were interviewed about their parent's marriage and temperament.

Table 1

Correlation Matrix of Selected Family and Individual Characteristics from 1929 to 1935

		1	2	3	4	5	6	7	8	9	10	11	$\bar{x}$	SD	N=
Marital Tension 1930[b]	1)												3.2	1.0	111
Marital Tension, 1933-35[c]	2)	.66											3.1	1.0	102
Wife Temperamental, 1930[b]	3)	.40	.29										3.5	0.7	111
Husband Temperamental, 1930[b]	4)	.38	.30	-.10[a]									3.2	0.8	110
Wife Temperamental, 1933-35[c]	5)	.31	.35	.68	-.12[a]								3.0	0.7	105
Husband Temperamental, 1933-35[c]	6)	.41	.50	-.08[a]	.79	-.03[a]							2.9	0.8	104
Financial Conflicts, 1930[b]	7)	.58	.47	.24	.44	.20	.38						3.2	1.0	110
Financial Conflicts, 1933-35[c]	8)	.31	.50	-.04[a]	.26	-.03[a]	.33	.43					2.7	0.9	103
$ Family Income, 1929	9)	-.10[a]	-.15[a]	.07[a]	-.09[a]	.01[a]	-.01[a]	-.30	-.41				2851	2042	112
SES (5 points)[d], 1929	10)	-.03[a]	-.11[a]	.10[a]	.09[a]	.10[a]	.06[a]	-.13[a]	-.31	.57			2.0	1.3	112
Wife Age (Years), 1929	11)	.11[a]	.07[a]	-.07[a]	.23	.01[a]	.14[a]	.25	.24	-.39	-.15		29.4	5.3	112
Husband Age (Years), 1929	12)	-.13[a]	-.16	-.09[a]	.02[a]	-.05[a]	-.12[a]	.15[a]	.05[a]	-.30	-.11[a]	.71	33.1	6.7	112

[a] Not significant at .05 level.

[b] Five-point clinical ratings based on interviews with husbands, wives, and home observations.

[c] Five-point clinical ratings based on interviews with wives and home observations. Yearly ratings averaged across 1933, 1934, and 1935 or years of available data.

[d] Hollingshead five-point index of husband's occupation and education coded so five equals high status.

Table 2

Marriage and Personality Correlates of Economic Decline, 1930-41

Correlations with (N =)	1930	% Income Loss to 1933-35[b] 1933-35	1936-38	1939-41	Economic Hardship, 1936-40[c] 1936-38	1939-41
A. Marital Tension	.13[a] (109)	.28 (100)	.19 (97)	.28 (97)	.36 (93)	.46 (93)
B. Financial Conflicts	.20 (108)	.56 (102)	.36 (94)	.40 (87)	.52 (89)	.47 (82)
C. Husband Temperamental[d]						
Below Median, 1930	-.17[a] (57)	.10[a] (54)	-.08[a] (53)	-.18[a] (50)	-.28 (50)	.09[a] (48)
Above Median, 1930	.02[a] (51)	.34 (48)	.42 (47)	.33 (46)	.63 (45)	.67 (44)
D. Wife Temperamental[d]						
Below Median, 1930	-.16[a] (57)	-.16[a] (56)	-.23 (56)	-.17[a] (56)	-.08[a] (53)	.21 (53)
Above Median, 1930	.02[a] (52)	.00[a] (47)	-.04[a] (49)	.02[a] (45)	.05[a] (46)	-.11[a] (43)

[a] $p < .10$, two-tailed

[b] computed as: (Family Income, 1929 - Family Income, 1933-35 low year)/Family Income, 1929)*100

[c] Index based on sum of three dichtomized items: 1) ever on public assistance, 1936-40 -- 1 = yes, 0 = no: 2) head ever out of work, 1936-40 -- 1 - yes, 0 = no; and 3) a constructed item. A score of '1' on item 3 means either the family never recovered its 1929 income through the 1930s or that it did not rise above $1,200 during the 1930s. Scores thus range from 0 to 3.

[d] Husbands and wives were divided into subgroups who were below and above the median on the Tempermental Index in 1930.

Table 3

Effects of Income Loss on Changes in Marital Relations and Personality in the early 1930s: Regression Coefficients in Standard Form

Independent Variables	Dependent Variables (1933-1935)					
	Marital Tension			Husb. Temp.	Wife Temp.	Financial Conflicts
	(1) Beta	(2) Beta	(3) Beta	(4) Beta	(5) Beta	(6) Beta
Contemporary Measures; 1933-35						
% Income Loss(1929 to 1933-35)	.20**	.17*	.04	.19**	-.05	.47**
Husband Temperamental	--	.29**	.25**	--	--	.15+
Wife Temperamental	--	.24**	.23**	--	--	.03
Financial Conflicts	--	--	.27**	--	--	--
Lagged Measures; 1930						
Marital Tension	.62**	.43**	.40**	.12+	.04	--
Financial Conflicts	--	--	--	--	--	.18*
Husband Temperamental	--	--	--	.75**	--	--
Wife Temperamental	--	--	--	--	.67**	--
1929 Income(000's)	-.07	-.09	.01	.08	-.03	.32**
R^2=	.48**	.57**	.61**	.68**	.47**	.52**
N[a]=	(100)	(99)	(95)	(102)	(103)	(98)
Interactions (t-statistics)[b]						
Income Loss x Husband Temperamental, 1930	--	--	--	1.77+	--	2.01*
Income Loss x Wife Temperamental, 1930	--	--	--	--	0.89	-1.35
Income Loss x Marital Tension, 1930	--	--	--	0.78	-0.36	1.94+
Income Loss x SES, 1929	--	--	--	1.02	0.30	2.80**

+ p 10
* p .05
** p .01(two-tailed tests)

Table 3 Footnotes

[a]Pair-wise deletion used; N based on minimum sample size used in computation of convariances.

[b]Each model was reestimated entering these interaction terms one at a time. Collinearity prohibited entering several multiplicative interaction terms jointly. Shown are t-tests of the interaction effects. Note that class and 1930 marital tension were entered as main effects in all equations in which they appear as parts of interactions.

Table 4

Effects of Economic Hardship on Changes in Marital Relations and Personality in the late 1930s: Regression Coefficients in Standard Form

Independent Variables	Dependent Variables, 1939-41			
	Marital Tension (a)	Marital Tension (b)	Husband Temperamental (c)	Financial Conflicts (d)
Economic Hardship; 1936-40[a]	.15**	.05	.44**	.21*
Contemporary Measures; 1936-40				
Financial Conflicts	--	.19**	--	--
Husband Tempermental	--	.10+	--	-.15+
Wife Tempermental	--	.01	--	.10
Lagged Measures; 1936-38				
Marital Tension	.81**	.71**	-.09	--
Financial Conflicts	--	--	--	.77**
Husband Tempermental	--	--	.37**	--
1929 Income (000's)	-.04	-.02	.01	-.20**
R^2 =	.79**	.81**	.36**	.62**
N[b] =	(93)	(82)	(92)	(79)
Interactions (t-statistics)[c]				
Hardship x Husband Temp., 1930	--	--	2.75*	1.04
Hardship x Marital Tension, 1930	--	--	1.80+	1.28
Hardship x SES	--	--	1.43	0.87

see Footnotes on attached page

Table 4 Footnotes:

+ p $<$.10, * p $<$.05, **p. $<$01(two-tailed tests)

[a] Index based on sum of three dichotomized items: 1) ever on public assistance 1936-40--1 = yes, 0 = no; 2) head ever out of work, 1936-40 -- 1 = yes, 0 = no; and 3) a constructed item. A score of '1' on item 3 means either the family never recoverd its 1929 income through the 1930s or that it did not rise above $1,200 during the 1930s. Scores thus range from 0 to 3.

[b] Pair-wise deletion used; N based on minimum sample size used in computation of covariances.

[c] Each model was reestimated entering these interaction terms one at a time. Collinearity prohibited entering several multiplicative interaction terms jointly. Shown are t-tests of the interaction effects. Note that class and 1930 marital tension were entered as main effects in all equations in which they appear in interaction terms.